### TITLE —ENERGY RESEARCH AND DEVELOPMENT

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- Sec. 64. Domestic vehicle battery manufacturing research.

1	TITLEENERGY RESEARCH
2	AND DEVELOPMENT
3	Subtitle A—Funding
4	SEC01. AUTHORIZATION OF APPROPRIATIONS FOR EN-
5	ERGY RESEARCH, DEVELOPMENT, DEM-
6	ONSTRATION, AND COMMERCIAL APPLICA-
7	TION ACTIVITIES.
8	(a) Energy Efficiency; Distributed Energy
9	AND ELECTRIC ENERGY SYSTEMS; RENEWABLE EN-
10	ERGY.—
11	(1) In general.—There are authorized to be
12	appropriated to the Secretary of Energy to carry out
13	research, development, demonstration, and commer-
14	cial application activities described in paragraph
15	(2)—
16	(A) \$1,974,000,000 for fiscal year 2010;
17	(B) \$2,388,000,000 for fiscal year 2011;
18	(C) \$2,821,000,000 for fiscal year 2012;
19	and
20	(D) $$3,258,000,000$ for fiscal year 2013.
21	(2) Activities.—Paragraph (1) applies to—
22	(A) energy efficiency and conservation re-
23	search, development, demonstration, and com-
24	mercial application activities, including activi-
25	ties authorized under subtitle A of title IX of

1	the Energy Policy Act of 2005 (42 U.S.C.
2	16191 et seq.);
3	(B) distributed energy and electric energy
4	system activities, including activities authorized
5	under subtitle B of title IX of that Act (42
6	U.S.C. 16211 et seq.); and
7	(C) renewable energy research, develop-
8	ment, demonstration, and commercial applica-
9	tion activities, including activities authorized
10	under subtitle C of title IX of that Act (42
11	U.S.C. 16231 et seq.).
12	(b) Nuclear Energy.—Section 951 of the Energy
13	Policy Act of 2005 (42 U.S.C. 16271) is amended by
14	striking subsection (b) and inserting the following:
15	"(b) Authorization of Appropriations for
16	Core Programs.—There are authorized to be appro-
17	priated to the Secretary to carry out nuclear energy re-
18	search, development, demonstration, and commercial ap-
19	plication activities, including activities authorized under
20	this subtitle—
21	(1) \$988,000,000 for fiscal year 2010;
22	(2) \$1,196,000,000 for fiscal year 2011;
23	"(3) $$1,394,000,000$ for fiscal year 2012; and
24	"(4) $$1,592,000,000$ for fiscal year 2013.".

1	(c) Fossil Energy.—Section 961(b) of the Energy
2	Policy Act of 2005 (42 U.S.C. 16291(b)) is amended—
3	(1) in paragraph (2), by striking "and" after
4	the semicolon at the end;
5	(2) in paragraph (3), by striking the period at
6	the end and inserting a semicolon; and
7	(3) by adding at the end the following:
8	"(4) \$1,074,000,000 for fiscal year 2010;
9	"(5) $$1,272,000,000$ for fiscal year 2011;
10	"(6) $$1,470,000,000$ for fiscal year 2012; and
11	"(7) $$1,668,000,000$ for fiscal year 2013.".
12	(d) Office of Science.—Section 971(b) of the En-
13	ergy Policy Act of 2005 (42 U.S.C. 16311(b)) is amend-
14	ed—
15	(1) in paragraph (3), by striking "and" after
16	the semicolon at the end; and
17	(2) by striking paragraph (4) and inserting the
18	following:
19	(4) \$5,800,000,000 for fiscal year 2010;
20	"(5) $$6,468,740,000$ for fiscal year 2011;
21	"(6) $$7,214,586,000$ for fiscal year 2012; and
22	"(7) \$8.046.427.000 for fiscal year 2013.".

23

24

and

# **Subtitle B—Energy Workforce** 1 **Development** 2 3 SEC. 11. SHORT TITLE. This subtitle may be cited as the "Energy Workforce 4 Development Act of 2009". 5 6 SEC. 12. STANDARDS FOR ENERGY CAREER ACADEMIES. 7 Section 3164 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a) is amend-9 ed— 10 (1) by redesignating subsections (c) through (f) 11 as subsections (d) through (g), respectively; and 12 (2) by inserting after subsection (b) the fol-13 lowing: 14 "(c) Energy Career Academies.—The Director of Science, Engineering, and Mathematics Education shall 15 16 establish (using methodologies that are consistent with methodologies used for smaller learning communities and endorsed by the Association for Career and Technical 18 19 Education) best practices for career pathway programs at 20 public secondary schools that— 21 "(1) prepare students for careers in the energy 22 technology industry (as defined in section 1101 of

the Energy Policy Act of 2005 (42 U.S.C. 16411);

1	"(2) provide sufficient training to allow acad-
2	emy graduates to secure entry-level employment or
3	apprenticeships in the energy technology industry.".
4	SEC13. ENERGY CAREER ACADEMIES.
5	The Department of Energy Science Education En-
6	hancement Act is amended—
7	(1) by redesignating sections 3168 and 3169
8	(42 U.S.C. 7381d, 7381e) as sections 3169 and
9	3170, respectively; and
10	(2) by inserting after section 3167 (42 U.S.C.
11	7381c-1) the following:
12	"SEC. 3168. ENERGY CAREER ACADEMIES.
13	"(a) Purpose.—The purpose of this section is to es-
14	tablish a program of grants to public secondary schools
15	to help create or expand energy career academies.
16	"(b) Definitions.—In this section:
17	"(1) COMMUNITY COLLEGE.—The term 'com-
18	munity college' means a junior or community college
19	(as defined in section 312(f) of the Higher Edu-
20	cation Act of 1965 (20 U.S.C. 1058(f))).
21	"(2) DIRECTOR.—The term 'Director' means
22	the Director of Science, Engineering, and Mathe-
23	matics Education.
24	"(3) Energy career academy.—The term
25	'energy career academy' means a public secondary

1	school that meets the best practices determined by
2	the Director under section 3164(c).
3	"(c) Grants.—From the amounts made available
4	under subsection (h), the Secretary, acting through the
5	Director and in consultation with the Secretary of Labor,
6	shall award renewable 5-year grants to State departments
7	of education on a competitive basis, to provide assistance
8	to school districts for the costs of establishing or expand-
9	ing energy career academies.
10	"(d) Federal and Non-Federal Shares.—
11	"(1) Federal share.—The Federal share of
12	the costs described in subsection (c) shall not exceed
13	33 percent.
14	"(2) Non-federal share.—The non-federal
15	share of the costs described in subsection (c) shall
16	be—
17	"(A) not less than 67 percent; and
18	"(B) provided from non-Federal sources
19	in cash or in kind, fairly evaluated, including
20	services.
21	"(e) Application.—To be eligible to receive a grant
22	under this section, a school district shall submit to the
23	Director an application at such time, in such manner, and
24	containing such information as the Director may require
25	that describes—

1	"(1) the process by which, and selection criteria
2	with which, the school district will select and des-
3	ignate a school to host the proposed energy career
4	academy;
5	"(2) how the State department of education will
6	ensure that funds made available under this section
7	are used to establish or expand an energy career
8	academy;
9	"(3) how the State department of education will
10	use technical assistance and support from the De-
11	partment, industry partners, community colleges,
12	and other entities with experience and expertise in
13	energy workforce training;
14	"(4) the curricula and materials to be used in
15	the energy career academy;
16	"(5) the availability of funds from non-Federal
17	sources for the costs of the activities authorized
18	under this section; and
19	"(6) a plan to sustain the program without
20	Federal funding.
21	"(f) DISTRIBUTION.—In awarding grants under this
22	section, the Director shall ensure a wide, equitable dis-
23	tribution of grants among regions of the United States.
24	"(g) Evaluation and Report.—

1	"(1) EVALUATION.—Each school district that
2	receives a grant under this section shall develop and
3	carry out an evaluation and accountability plan for
4	the activities funded through the grant that meas-
5	ures the impact of the activities, including measur-
6	able objectives for student academic achievement,
7	and job placement statistics for academy graduates.
8	"(2) Report to director.—The State de-
9	partment of education shall submit to the Director
10	a report describing the results of the evaluation and
11	accountability plan.
12	"(3) Report to congress.—Not later than 2
13	years after the date of enactment of the Energy
14	Workforce Development Act of 2009, the Director
15	shall submit a report describing the impact of the
16	activities assisted with funds made available under
17	this section to—
18	"(A) the Committee on Science and Tech-
19	nology of the House of Representatives;
20	"(B) the Committee on Energy and Com-
21	merce of the House of Representatives;
22	"(C) the Committee on Energy and Nat-
23	ural Resources of the Senate; and
24	"(D) the Committee on Health, Education,
25	Labor, and Pensions of the Senate.

1	"(h) AUTHORIZATION OF APPROPRIATIONS.—There
2	are authorized to be appropriated to carry out this sec-
3	tion—
4	"(1) \$14,000,000 for fiscal year 2009;
5	"(2) $$22,500,000$ for fiscal year 2010; and
6	"(3) \$30,000,000 for fiscal year 2011.".
7	SEC14. ELECTRIC UTILITY TRADES PROGRAM FOR COM-
8	MUNITY COLLEGES.
9	The Protecting America's Competitive Edge Through
10	Energy Act (42 U.S.C. 16531 et seq.) is amended—
11	(1) by redesignating sections 5006 through
12	5012 (42 U.S.C. 16534 through 16538) as sections
13	5007 through 5013, respectively; and
14	(2) by inserting after section 5005 (42 U.S.C.
15	16533) the following:
16	"SEC. 5006. ELECTRIC UTILITY TRADES PROGRAM FOR
17	COMMUNITY COLLEGES.
18	"(a) Purpose.—The purpose of this section is to ad-
19	dress the decline in the number of qualified employees for
20	the electric utility industry.
21	"(b) Definition of Community College.—In this
22	section, the term 'community college' means a junior or

23 community college (as defined in section 312(f) of the

24 Higher Education Act of 1965 (20 U.S.C. 1058(f))).

- 1 "(c) Establishment.—The Secretary shall estab-
- 2 lish, in accordance with this section, a program to expand
- 3 and enhance the educational capabilities of community col-
- 4 leges to prepare students for careers in trades relevant to
- 5 the electric utility industry.
- 6 "(d) Grants.—The Secretary shall award competi-
- 7 tive grants to community colleges that establish or expand
- 8 academic degree programs in the electric utility trades.
- 9 "(e) Priority.—In evaluating grants under this sec-
- 10 tion, the Secretary shall give priority to proposals that in-
- 11 volve existing or new partnerships with private industry
- 12 or other eligible electric utility entities or involve schools
- 13 with underserved populations, as determined by the Sec-
- 14 retary.
- 15 "(f) Criteria.—Criteria for a grant awarded under
- 16 this section shall be based on—
- 17 "(1) the potential to attract students to pro-
- 18 gram;
- 19 "(2) academic rigor, as determined by the Sec-
- 20 retary;
- 21 "(3) the ability to offer hands-on learning op-
- 22 portunities (including internships and apprentice-
- ship) in the electric utility sector;

1	"(4) a demonstrated commitment to partner
2	with secondary schools to promote careers in the
3	electrical utility industry; and
4	"(5) the long-term sustainability of the program
5	without Federal funding.
6	"(g) Duration and Amount.—
7	"(1) Duration.—A grant under this section
8	may be—
9	"(A) up to 5 years in duration; and
10	"(B) renewed subject to the criteria de-
11	scribed in subsection (f).
12	"(2) Amount.—A community college that re-
13	ceives a grant under this section shall be eligible for
14	up to \$500,000 for each year of the grant period.
15	"(h) Use of Funds.—A community college that re-
16	ceives a grant under this section may use the grant to—
17	"(1) recruit and retain new faculty;
18	"(2) develop core and specialized course con-
19	tent;
20	"(3) encourage collaboration between faculty
21	and industry partners;
22	"(4) support outreach efforts to recruit stu-
23	dents; and
24	"(5) provide scholarships to participating stu-
25	dents.".

1	SEC15. STUDENT AWARENESS OF ENERGY CAREER OP-
2	PORTUNITIES.
3	Section 1101 of the Energy Policy Act of 2005 (42
4	U.S.C. 16411) is amended—
5	(1) in subsection (a)—
6	(A) by redesignating paragraphs (1) and
7	(2) as paragraphs (2) and (3), respectively; and
8	(B) by inserting before paragraph (2) (as
9	so redesignated) the following:
10	"(1) COMMUNITY COLLEGE.—The term 'com-
11	munity college' means a junior or community college
12	(as defined in section 312(f) of the Higher Edu-
13	eation Act of 1965 (20 U.S.C. 1058(f))).";
14	(2) by redesignating subsection (d) as sub-
15	section (f); and
16	(3) by inserting after subsection (c) the fol-
17	lowing:
18	"(d) Career Counselor Outreach.—The Sec-
19	retary, in consultation with the Secretary of Labor, shall
20	establish a program to communicate information collected
21	under subsection (b) on a nationwide basis to—
22	"(1) guidance counselors at secondary schools;
23	and
24	"(2) career development offices at community
25	colleges and institutions of higher education.

1	"(e) Student Awareness of Energy Career Op-
2	PORTUNITIES.—The Secretary shall create and maintain
3	a website, and interface with Federal Trio programs, to
4	provide secondary and postsecondary school students with
5	information on careers in energy technology industries, in-
6	cluding—
7	"(1) career information and job descriptions for
8	the energy technology industry;
9	"(2) projected workforce shortages in the en-
10	ergy technology industry;
11	"(3) a comprehensive listing and description of
12	institutions of higher education providing degrees
13	with a specific focus on the energy technology indus-
14	$\operatorname{try};$
15	"(4) a comprehensive listing and description of
16	community colleges and vocational training pro-
17	grams with a particular focus on the energy tech-
18	nology industry; and
19	"(5) sources of scholarships and other forms of
20	financial aid with particular relevance to the energy
21	technology industry.".
22	SEC16. COORDINATION OF ENERGY WORKFORCE TRAIN-
23	ING PROGRAMS.
24	(a) In General.—Not later than 1 year after the
25	date of enactment of this Act, the Director of the Office

1	of Science and Technology Policy shall submit to Congress
2	a report that surveys energy workforce training programs
3	funded by Federal agencies, including—
4	(1) programs for training skilled technical per-
5	sonnel (as defined in section 1101(a) of the Energy
6	Policy Act of 2005 (42 U.S.C. 16411(a)));
7	(2) undergraduate and graduate degree pro-
8	grams with course curricula related to the produc-
9	tion, transmission, and use of energy; and
10	(3) secondary school programs with course cur-
11	ricula relating to the production, transmission, and
12	use of energy.
13	(b) Coordination Plan.—The plan shall provide—
14	(1) a coordinated Federal strategy for sup-
15	porting the training of a domestic workforce to sup-
16	port the production, transmission, and use of energy
17	in the United States; and
18	(2) a 5-year budget profile to support the strat-
19	egy.
20	SEC 17. DIRECT HIRE AUTHORITY.
21	(a) In General.—Notwithstanding sections 3304
22	and 3309 through 3318 of title 5, United States Code,
23	the Secretary of Energy may, upon a determination that
24	there is a severe shortage of candidates or a critical hiring

25 need for particular positions, recruit and directly appoint

- 1 highly qualified scientists, engineers, or critical technical
- 2 personnel into the competitive service.
- 3 (b) Exception.—The authority granted under sub-
- 4 section (a) shall not apply to positions in the excepted
- 5 service or the Senior Executive Service.
- 6 (c) Requirements.—In exercising the authority
- 7 granted under subsection (a), the Secretary of Energy
- 8 shall ensure that any action taken by the Secretary—
- 9 (1) is consistent with the merit principles of
- section 2301 of title 5, United States Code; and
- 11 (2) complies with the public notice requirements
- of section 3327 of title 5, United States Code.
- 13 (d) Termination of Effectiveness.—The au-
- 14 thority provided by this section terminates effective on the
- 15 date that is 2 years after the date of enactment of this
- 16 Act.
- 17 SEC. 18. CRITICAL PAY AUTHORITY.
- 18 (a) In General.—Notwithstanding section 5377 of
- 19 title 5, United States Code, and without regard to the pro-
- 20 visions of that title governing appointments in the com-
- 21 petitive service or the Senior Executive Service and chap-
- 22 ters 51 and 53 of that title (relating to classification and
- 23 pay rates), the Secretary of Energy may establish, fix the
- 24 compensation of, and appoint individuals to critical posi-

1	tions needed to carry out the functions of the Department
2	of Energy, if the Secretary of Energy certifies that—
3	(1) the positions—
4	(A) require expertise of an extremely high
5	level in a scientific or technical field; and
6	(B) the Department of Energy would not
7	successfully accomplish an important mission
8	without such an individual; and
9	(2) exercise of the authority is necessary to re-
10	cruit an individual exceptionally well qualified for
11	the position.
12	(b) Limitations.—The authority granted under sub-
13	section (a) shall be subject to the following conditions:
14	(1) The number of critical positions authorized
15	by subsection (a) may not exceed 40 at any 1 time
16	in the Department of Energy.
17	(2) The term of an appointment under sub-
18	section (a) may not exceed 4 years.
19	(3) An individual appointed under subsection
20	(a) may not have been a Department of Energy em-
21	ployee within the 2 years prior to the date of ap-
22	pointment.
23	(4) Total annual compensation for any indi-
24	vidual appointed under subsection (a) may not ex-
25	ceed the highest total annual compensation payable

- 1 at the rate determined under section 104 of title 3,
- 2 United States Code.
- 3 (5) An individual appointed under subsection
- 4 (a) may not be considered to be an employee for
- 5 purposes of subchapter II of chapter 75 of title 5,
- 6 United States Code.
- 7 (c) Notification.—Each year, the Secretary of En-
- 8 ergy shall submit to Congress a notification that lists each
- 9 individual appointed under this section.

# 10 SEC. 19 REEMPLOYMENT OF CIVILIAN RETIREES.

- 11 (a) IN GENERAL.—Notwithstanding part 553 of title
- 12 5, Code of Federal Regulations (relating to reemployment
- 13 of civilian retirees to meet exceptional employment needs),
- 14 or successor regulations, the Secretary of Energy may ap-
- 15 prove the reemployment of an individual to a particular
- 16 position without reduction or termination of annuity if the
- 17 hiring of the individual is necessary to carry out a critical
- 18 function of the Department of Energy for which suitably
- 19 qualified candidates exist.
- 20 (b) Limitations.—An annuitant hired with full sal-
- 21 ary and annuities under the authority granted by sub-
- 22 section (a)—
- 23 (1) shall not be considered an employee for pur-
- poses of subchapter III of chapter 83 and chapter
- 25 84 of title 5, United States Code;

23

In this subtitle:

1	(2) may not elect to have retirement contribu-
2	tions withheld from the pay of the annuitant;
3	(3) may not use any employment under this
4	section as a basis for a supplemental or recomputed
5	annuity; and
6	(4) may not participate in the Thrift Savings
7	Plan under subchapter III of chapter 84 of title 5,
8	United States Code.
9	(c) Limitation on Term.—The term of employment
10	of any individual hired under subsection (a) may not ex-
11	ceed an initial term of 2 years, with an additional 2-year
12	appointment under exceptional circumstances.
13	Subtitle C—Strengthening Edu-
14	cation and Training in the Sub-
15	surface Geosciences and Engi-
16	neering for Energy Develop-
17	ment
18	SEC31. SHORT TITLE.
19	This subtitle may be cited as the "Strengthening
20	Subsurface Geosciences and Engineering for Energy De-
21	velopment Act of 2009."
22	SEC32. DEFINITIONS.

1	(1) ABET.—The term "ABET" means ABET,
2	Inc., a nationally recognized accreditation organiza-
3	tion for college and university engineering programs.
4	(2) Advisory committee.—The term "Advi-
5	sory Committee" means the Advisory Committee es-
6	tablished under section38.
7	(3) Institution of higher education.—The
8	term "institution of higher education" has the
9	meaning given the term in section 101(a) of the
10	Higher Education Act of 1965 (20 U.S.C. 1001(a)).
11	(4) Minority-Serving institution.—The
12	term "minority-serving institution" means—
13	(A) a part B institution (as defined in sec-
14	tion 322 of the Higher Education Act of 1965
15	(20 U.S.C. 1061));
16	(B) a Hispanic-serving institution (as de-
17	fined in section 502(a) of the Higher Education
18	Act of 1965 (20 U.S.C. 1101a(a))); or
19	(C) a tribally controlled college or univer-
20	sity (as defined in section 2(a) of the Tribally
21	Controlled College Assistance Act of 1978 (25
22	U.S.C. 1801(a))).
23	(5) Recognized program.—The term "recog-
24	nized program" means a program at an institution
25	of higher education that is—

1	(A) an engineering program with sub-
2	surface applications that is—
3	(i) accredited by ABET; and
4	(ii) focused on petroleum or natural
5	gas production, groundwater, geothermal
6	energy, the production of mineral re-
7	sources, and the development of permanent
8	underground workings, as demonstrated by
9	the curriculum and the expertise of its fac-
10	ulty; or
11	(B) a program in geology or geophysics
12	that—
13	(i) includes undergraduate or grad-
14	uate programs of research and education
15	applicable to energy, groundwater, and
16	mineral development;
17	(ii) includes programs of research and
18	education in exploration for, and produc-
19	tion of, such deposits and resources; and
20	(iii) the Secretary, after review by the
21	Advisory Committee of the program and
22	its outcomes, determines to be appropriate
23	for funding under this subtitle.
24	(6) Secretary.—The term "Secretary" means
25	the Secretary of the Interior.

1	(7) Consortium.—The term "consortium"
2	means a research and educational partnership that
3	may include—
4	(A) institutions of higher education;
5	(B) professional societies or foundations;
6	(C) industry associations;
7	(D) individual business entities;
8	(E) State agencies;
9	(F) federally recognized multistate com-
10	missions and regional organizations;
11	(G) Federal agencies;
12	(H) national laboratories;
13	(I) nongovernmental organizations; and
14	(J) individuals.
15	SEC33. POLICY.
16	It is the policy of the United States to maintain the
17	human capital needed to preserve and foster the economi-
18	cally viable clean energy, groundwater, and mineral re-
19	sources security of the United States, through financial
20	assistance for science and technology programs that edu-
21	cate, train, and retrain the personnel needed for United
22	States energy and mineral resources security.
23	SEC34. RESEARCH PERSONNEL AND PROGRAMS.
24	(a) In General.—In support of the policy described
25	in section 33, the Secretary shall provide research funds

- 1 to institutions of higher education to assist recognized pro-
- 2 grams in subsurface geosciences and engineering, includ-
- 3 ing programs in energy (geological carbon storage), petro-
- 4 leum, groundwater, economic geology, mining, and mineral
- 5 and geological engineering education and research.
- 6 (b) Conditions.—All funds provided under sub-
- 7 section (a) shall be—
- 8 (1) directed only to programs recognized by the
- 9 Secretary; and
- 10 (2) subject to this subtitle.
- 11 (c) Types of Research.—Research conducted
- 12 using funds provided under subsection (a) shall include
- 13 studies and research—
- 14 (1) to enhance basic science and engineering;
- 15 (2) to provide proof of scientific or engineering 16 concepts; and
- 17 (3) to determine scientific or engineering feasi-
- bility to enhance discovery, development, and pro-
- duction of energy, groundwater, and mineral re-
- 20 sources while reducing environmental impacts.
- 21 (d) Duration of Program; Number of Stu-
- 22 DENTS.—Each institution of higher education receiving
- 23 funds under subsection (a) shall—
- 24 (1) maintain the program for which the funds
- are provided for a period of at least 10 years begin-

	21
1	ning on the date of the last receipt of those funds;
2	and
3	(2) take steps described in the application for
4	research funding submitted to the Secretary to in-
5	crease the number of undergraduate students en-
6	rolled in and completing the programs of study in
7	recognized programs with subsurface applications.
8	(e) Minority-Serving Institutions.—The Sec-
9	retary shall give particular consideration to minority-serv-
10	ing institutions that have an established recognized pro-
11	gram or that propose to establish a recognized program,
12	including by—
13	(1) assigning appropriate employees to serve as
14	mentors and adjunct faculty;
15	(2) transferring appropriate equipment to the
16	programs; and
17	(3) allowing faculty or students at those institu-
18	tions free access to appropriate Department train-
19	ing.
20	(f) Consortia.—Where appropriate, the Secretary
21	may make funds available to consortia to conduct projects
22	of broad application that could not otherwise be under-
23	taken, including national and regional projects in sub-
24	surface geosciences and engineering, on the condition that

25 funds provided to any consortium shall be given only to

- 1 a single eligible institution of higher education with a rec-
- 2 ognized program which shall be responsible for distribu-
- 3 tion, monitoring, and reporting on the activities of the con-
- 4 sortium, as required by the Secretary.

## 5 SEC. 35. SCHOLARSHIPS AND FELLOWSHIPS.

- 6 (a) IN GENERAL.—The Secretary shall provide funds
- 7 to institutions of higher education with recognized pro-
- 8 grams for the purpose of providing merit-based scholar-
- 9 ships for undergraduate geoscience or engineering edu-
- 10 cation with general subsurface applications, and graduate
- 11 fellowships in the applied geosciences and subsurface engi-
- 12 neering, including applications relating to—
- 13 (1) petroleum, chemical, mining, geological
- 14 (such as geological carbon storage), geophysical,
- 15 groundwater, or mineral engineering;
- 16 (2) petroleum geology;
- 17 (3) geothermal geology;
- 18 (4) mining and economic geology;
- 19 (5) petroleum and mining geophysics; or
- 20 (6) mineral economics.
- 21 (b) Veterans and Service Members.—In award-
- 22 ing scholarships and fellowships under this section, an in-
- 23 stitution of higher education shall encourage applications
- 24 from veterans and service members who have received or
- 25 will receive the Afghanistan Campaign Medal or the Iraq

1	Campaign Medal as authorized by Public Law 108–234
2	(10 U.S.C. 1121 note; 118 Stat. 655) and Executive
3	Order No. 13363.
4	(c) REQUIREMENTS FOR RECEIPT OF SCHOLARSHIP
5	OR FELLOWSHIP.—To receive a scholarship or a graduate
6	fellowship, an individual student shall—
7	(1) be a lawful permanent resident of the
8	United States or a United States citizen or national;
9	and
10	(2) agree in writing to complete a course of
11	studies and receive a degree in a recognized program
12	in an area specified in subsection (a).
13	(d) Requirements for Retention of Scholar-
14	SHIP OR FELLOWSHIP.—
15	(1) In general.—To retain a scholarship or
16	graduate fellowship awarded under this section, an
17	individual shall, as determined by the applicable in-
18	stitution of higher education—
19	(A) continue in 1 of the course of studies
20	authorized by this section; and
21	(B) remain in good academic standing.
22	(2) Reinstatement.—An institution of higher
23	education may allow for reinstatement of a scholar-
24	ship or graduate fellowship in a case in which an in-

1	dividual failed to maintain good academic standing
2	but subsequently regained such standing.
3	(e) Application of Institution of Higher Edu-
4	CATION.—An institution of higher education seeking funds
5	under this section shall describe, in the application of the
6	institution of higher education submitted to the Secretary
7	for the funding—
8	(1) the number of students that would be
9	awarded scholarships or fellowships if the application
10	were to be approved;
11	(2) the manner in which those students would
12	be selected; and
13	(3) the ways in which the requirements of this
14	section would be enforced.
15	SEC36. CAREER TECHNICAL AND COMMUNITY COLLEGE
16	EDUCATION.
17	(a) In General.—The Secretary shall support pro-
18	grams in subsurface geosciences and engineering that—
19	(1) are focused on technology and the use of
20	that technology in energy, groundwater and mineral
21	production, and related maintenance, operational
22	safety, or energy infrastructure protection and secu-
23	rity;
24	(2) prepare students for advanced or super-

1	geological carbon storage, groundwater, or mineral
2	mining industries;
3	(3) grant an associate's degree or a bacca-
4	laureate degree; and
5	(4) prepare students for further higher edu-
6	cation in the recognized programs.
7	(b) Eligible Programs.—
8	(1) In general.—Programs that are eligible to
9	receive support under this section are those that
10	provide training for individuals seeking to enter the
11	industries described in subsection (a)(2), such as—
12	(A) joint apprenticeship programs;
13	(B) internships in industry, Federal, or
14	State offices;
15	(C) research experiences at national lab-
16	oratories authorized by Federal law; and
17	(D) other programs at institutions of high-
18	er education (including community colleges).
19	(2) Consideration.—The Secretary shall give
20	particular consideration to supporting programs that
21	provide training for a progressive career path in the
22	industries described in subsection (a)(2).
23	(3) Essential support.—The Secretary, after
24	consultation with the Advisory Committee, may offer
25	support to programs that grant degrees or certifi-

1	cates in programs that provide training in disciplines
2	that provide essential support for the industries de-
3	scribed in subsection (a)(2), including the disciplines
4	listed in paragraph (4), even if those programs are
5	not purposely designed to provide personnel for the
6	industries described in subsection (a)(2).
7	(4) DISCIPLINES.—The disciplines referred to
8	in paragraph (3) are—
9	(A) power transmission and operation;
10	(B) pipeline construction and operation;
11	(C) maintenance and maintenance logis-
12	tics;
13	(D) construction;
14	(E) manufacturing; and
15	(F) transportation and warehousing.
16	(c) Additional Requirements.—An institution of
17	higher education that receives funds under this section—
18	(1) shall demonstrate to the Secretary evi-
19	dence—
20	(A) of an institutional commitment for the
21	purposes of career technical education; and
22	(B) that the institution of higher education
23	has received or will receive industry cooperation
24	in the form of equipment, employee time, or do-

1	nations of funds to support the activities car-
2	ried out under this section;
3	(2) shall agree to maintain the programs for
4	which the funding is sought for a period of 10 years
5	beginning on the date on which the institution of
6	higher education receives the funds, unless the Sec-
7	retary finds that a shorter period of time is appro-
8	priate for the local labor market or is required by
9	State authorities; and
10	(3) may combine the funds with State funds,
11	and other Federal funds as allowed by applicable
12	law, to carry out programs described in this section,
13	on the condition that the use of funds received under
14	this section is reported to the Secretary not less
15	than annually.
16	(d) Advice.—The Secretary shall seek the advice of
17	the Advisory Committee in determining the criteria used
18	to carry out this section.
19	SEC37. USE OF FUNDS BY INSTITUTIONS.
20	(a) Cost-Sharing.—The Secretary—
21	(1) shall not require cost-sharing by a non-Fed-
22	eral source for—
23	(A) any research activity that is of a basic
24	or fundamental nature, as determined by the

1	appropriate officer of the Department of the In-
2	terior; or
3	(B) any scholarship or fellowship program;
4	and
5	(2) shall require appropriate cost-sharing for
6	research and development activities that are of an
7	applied, demonstration, or commercial nature, as so
8	determined.
9	(b) Prohibited Uses of Funds.—No funds made
10	available under this subtitle shall be applied to—
11	(1) the acquisition by purchase or lease of any
12	land or interest in land; or
13	(2) the rental, purchase, construction, preserva-
14	tion, or repair of any building.
15	(e) Maintenance and Upgrading.—Funds made
16	available under this subtitle may be used—
17	(1) with the express approval of the Secretary,
18	for proposals to maintain or upgrade existing labora-
19	tories and laboratory equipment; and
20	(2) for maintaining and upgrading mines and
21	oil and gas drilling rigs that are used for under-
22	graduate and graduate training and worker safety
23	training and that are owned by—
24	(A) a recognized program funded under
25	this subtitle; or

1	(B) by the institution of higher education
2	in which the recognized program is located.
3	(d) Officer.—Each institution of higher education
4	that receives funds under this subtitle shall have an officer
5	appointed by the governing authority of the institution of
6	higher education who shall—
7	(1) receive and account for all funds paid under
8	this subtitle; and
9	(2) submit to the Secretary, on or before the
10	first day of September of each year, an annual re-
11	port that includes—
12	(A) a description of work accomplished and
13	the status of projects underway, together with
14	a detailed statement of the amounts received
15	under this subtitle, during the preceding fiscal
16	year; and
17	(B) an accounting of amounts disbursed on
18	schedules prescribed by the Secretary.
19	(e) Public Availability of Information.—All
20	uses, products, processes, and other developments result-
21	ing from any research, demonstration, or experiment fund-
22	ed in whole or in part under this subtitle shall be made
23	available promptly to the general public, subject to—

1	(1) such exceptions or limitations as the Sec-
2	retary may determine to be necessary in the interest
3	of national security; and
4	(2) the applicable Federal law governing pat-
5	ents.
6	SEC38. ADVISORY COMMITTEE.
7	(a) Establishment of Advisory Committee.—
8	(1) In general.—The Secretary shall establish
9	an Advisory Committee to assist the Secretary in
10	carrying out this subtitle.
11	(2) Membership.—
12	(A) Voting members.—The Advisory
13	Committee shall be composed of 19 voting
14	members, including—
15	(i) the Assistant Secretary of the Inte-
16	rior responsible for land and minerals
17	management, who shall serve as the Chair-
18	person of the Advisory Committee; and
19	(ii) not more than 18 additional indi-
20	viduals, appointed by the Secretary, in con-
21	sultation with interested parties, who are
22	knowledgeable in the fields of energy, pe-
23	troleum, geothermal, groundwater, mining,
24	and mineral resources research, includ-
25	ing—

1	(I) 2 individuals who are univer-
2	sity leaders from an institution of
3	higher education with at least 1 recog-
4	nized program;
5	(II) 1 individual who is a commu-
6	nity or technical college administrator;
7	(III) 1 individual who is a tribal
8	college administrator;
9	(IV) 1 individual who is a career
10	technical education educator;
11	(V) 6 individuals who are rep-
12	resentatives equally distributed from
13	the energy, mining, and aggregate in-
14	dustries;
15	(VI) 1 individual who is a work-
16	ing miner;
17	(VII) 1 individual who is a work-
18	ing oilfield worker;
19	(VIII) 1 individual who is a rep-
20	resentative of the Interstate Oil and
21	Gas Compact Commission;
22	(IX) 1 individual who is a rep-
23	resentative of the Interstate Mining
24	Compact Commission;

1	(A) I individual who is a rep-
2	resentative of State geologists; and
3	(XI) 2 individuals who are rep-
4	resentatives of the general public.
5	(B) Nonvoting advisors.—The Chair-
6	person of the Advisory Committee may have
7	present during meetings individuals who shall
8	serve as nonvoting, technical advisors to the
9	Advisory Committee, such as representatives of
10	Federal agencies with responsibility for—
11	(i) energy, groundwater, and minerals
12	resources management;
13	(ii) energy and mineral resource inves-
14	tigations;
15	(iii) energy and mineral commodity in-
16	formation;
17	(iv) international trade in energy and
18	mineral commodities;
19	(v) mining safety regulation and mine
20	safety research; and
21	(vi) research into the development,
22	production, and use of energy and mineral
23	commodities.
24	(C) Prohibition on Federal Govern-
25	MENT EMPLOYMENT.—The member of the Ad-

1	visory Committee appointed under subpara-
2	graph (A)(ii) shall not be an employee or
3	former employee of the Federal Government.
4	(3) Term; vacancies.—
5	(A) TERM.—A member shall be appointed
6	for the life of the Advisory Committee.
7	(B) VACANCIES.—A vacancy on the Advi-
8	sory Committee—
9	(i) shall not affect the powers of the
10	Advisory Committee; and
11	(ii) shall be filled in the same manner
12	as the original appointment was made.
13	(4) Initial meeting.—Not later than 30 days
14	after the date on which all members of the Advisory
15	Committee have been appointed, the Advisory Com-
16	mittee shall hold the initial meeting of the Advisory
17	Committee.
18	(5) Meetings.—The Advisory Committee shall
19	meet at the call of the Chairperson.
20	(6) Quorum.—A majority of the members of
21	the Advisory Committee shall constitute a quorum,
22	but a lesser number of members may hold hearings.
23	(b) Duties.—The Advisory Committee—

1	(1) shall, following completion of the report re-
2	quired by section 385(c) of the Energy Policy Act of
3	2005 (Public Law 109–58; 119 Stat. 744)—
4	(A) consider the recommendations of the
5	report;
6	(B) formulate and recommend a national
7	plan for using the fiscal resources provided
8	under this subtitle; and
9	(C) submit the plan to the Secretary for
10	approval and use by the Secretary in carrying
11	out this subtitle;
12	(2) shall make recommendations to the Sec-
13	retary regarding the long-term and short-term viabil-
14	ity of the faculty at schools with recognized pro-
15	grams; and
16	(3) may recommend the awarding of graduate
17	fellowships and postdoctoral fellowships to those stu-
18	dents who declare their intent to seek roles as future
19	faculty at the recognized programs.
20	(c) Powers.—
21	(1) Hearings.—The Advisory Committee may
22	hold such hearings, meet and act at such times and
23	places, take such testimony, and receive such evi-
24	dence as the Advisory Committee considers advisable
25	to carry out this subtitle.

1	(2) Information from federal agencies.—
2	(A) IN GENERAL.—The Advisory Com-
3	mittee may secure directly from a Federal agen-
4	cy such information as the Advisory Committee
5	considers necessary to carry out this subtitle.
6	(B) Provision of Information.—On re-
7	quest of the Chairperson of the Advisory Com-
8	mittee, the head of the agency shall provide the
9	information to the Advisory Committee.
10	(3) Postal Services.—The Advisory Com-
11	mittee may use the United States mails in the same
12	manner and under the same conditions as other
13	agencies of the Federal Government.
14	(4) Gifts.—The Advisory Committee may ac-
15	cept, use, and dispose of gifts or donations of serv-
16	ices or property.
17	(d) Advisory Committee Personnel Matters.—
18	(1) Compensation of members.—
19	(A) Non-federal employees.—A mem-
20	ber of the Advisory Committee who is not an
21	officer or employee of the Federal Government
22	shall be compensated at a rate equal to the
23	daily equivalent of the annual rate of basic pay
24	prescribed for level IV of the Executive Sched-
25	ule under section 5315 of title 5, United States

25

1	Code, for each day (including travel time) dur-
2	ing which the member is engaged in the per-
3	formance of the duties of the Advisory Com-
4	mittee.
5	(B) Federal employees.—A member of
6	the Advisory Committee who is an officer or
7	employee of the Federal Government shall serve
8	without compensation in addition to the com-
9	pensation received for the services of the mem-
10	ber as an officer or employee of the Federal
11	Government.
12	(2) Travel expenses.—A member of the Ad-
13	visory Committee shall be allowed travel expenses,
14	including per diem in lieu of subsistence, at rates
15	authorized for an employee of an agency under sub-
16	chapter I of chapter 57 of title 5, United States
17	Code, while away from the home or regular place of
18	business of the member in the performance of the
19	duties of the Advisory Committee.
20	(3) Staff.—
21	(A) IN GENERAL.—The Chairperson of the
22	Advisory Committee may, without regard to the
23	civil service laws (including regulations), ap-
24	point and terminate an executive director and

such other additional personnel as are necessary

1	to enable the Advisory Committee to perform
2	the duties of the Advisory Committee.
3	(B) Confirmation of executive direc-
4	TOR.—The employment of an executive director
5	shall be subject to confirmation by the Advisory
6	Committee.
7	(C) Compensation.—
8	(i) In general.—Except as provided
9	in clause (ii), the Chairperson of the Advi-
10	sory Committee may fix the compensation
11	of the executive director and other per-
12	sonnel without regard to the provisions of
13	chapter 51 and subchapter III of chapter
14	53 of title 5, United States Code, relating
15	to classification of positions and General
16	Schedule pay rates.
17	(ii) Maximum rate of pay.—The
18	rate of pay for the executive director and
19	other personnel shall not exceed the rate
20	payable for level V of the Executive Sched-
21	ule under section 5316 of title 5, United
22	States Code.
23	(4) Detail of Federal Government em-
24	PLOYEES.—

1	(A) IN GENERAL.—An employee of the
2	Federal Government may be detailed to the Ad-
3	visory Committee without reimbursement.
4	(B) CIVIL SERVICE STATUS.—The detail of
5	the employee shall be without interruption or
6	loss of civil service status or privilege.
7	(5) Procurement of Temporary and inter-
8	MITTENT SERVICES.—The Chairperson of the Advi-
9	sory Committee may procure temporary and inter-
10	mittent services in accordance with section 3109(b)
11	of title 5, United States Code, at rates for individ-
12	uals that do not exceed the daily equivalent of the
13	annual rate of basic pay prescribed for level V of the
14	Executive Schedule under section 5316 of that title.
15	(e) TERMINATION OF ADVISORY COMMITTEE.—The
16	Advisory Committee shall terminate 90 days after the date
17	on which the Advisory Committee submits the plan of the
18	Advisory Committee under subsection (b)(1)(C).
19	SEC39. OFFICE; REGULATIONS.
20	Not later than 1 year after the date of enactment
21	of this Act, the Secretary shall establish a separate office
22	to administer, and to promulgate such regulations as are
23	necessary to carry out, this subtitle.

1	SEC40. AUTHORIZATION OF APPROPRIATIONS.
2	There is authorized to be appropriated to carry out
3	this subtitle \$200,000,000 for each of fiscal years 2010
4	through 2020, to remain available until expended
5	SEC41. STUDY OF AVAILABILITY OF SKILLED WORKERS.
6	Section 1830 of the Energy Policy Act of 2005 (Pub-
7	lic Law 109–58; 119 Stat. 1137) is amended to read as
8	follows:
9	"SEC. 1830. STUDY OF AVAILABILITY OF SKILLED WORK-
10	ERS.
11	"(a) In General.—The Secretary, in cooperation
12	with the Secretary of Labor, shall enter into an arrange-
13	ment with the National Academy of Sciences under which
14	the National Academy of Sciences shall conduct a study
15	of the short-term and long-term availability of skilled
16	workers to meet the energy and mineral security require-
17	ments of the United States.
18	"(b) Inclusions.—The study shall include—
19	"(1) an analysis of the need for and availability
20	of workers for the oil, natural gas, coal, nonfuel
21	mineral, nuclear, geothermal, solar, wind, and elec-
22	tric utility industries;
23	"(2) an analysis of the availability of skilled
24	labor at both entry level and more senior levels;
25	"(3) recommendations for actions needed to

meet future labor requirements;

26

1	"(4) a description of current and projected edu-
2	cation and training programs for those workers at
3	community and technical colleges and universities or
4	through other job-specific training initiatives;
5	"(5) an analysis of the potential for skilled for-
6	eign labor to meet projected sectoral labor require-
7	ments;
8	"(6) an assessment of potential job health and
9	safety impacts, national security, and domestic eco-
10	nomic impacts of a long-term workforce shortage or
11	surplus; and
12	"(7) a description and evaluation of data
13	sources available, Federal data collection and coordi-
14	nation, and potential research initiatives for future
15	decisionmaking relating to workforce issues.
16	"(c) Report.—Not later than December 31, 2012,
17	the Secretary shall submit to Congress a report that de-
18	scribes the results of the study.
19	"(d) Authorization of Appropriations.—There
20	is authorized to be appropriated to the Secretary to carry
21	out this section \$2,000,000.".

## 1 Subtitle D—Grand Challenges

## 2 Research Initiative

- 3 SEC. 51. SHORT TITLE.
- 4 This subtitle may be cited as the "Grand Challenges
- 5 Research Initiative Act".
- 6 SEC. 52. GRAND CHALLENGES RESEARCH INITIATIVE.
- 7 (a) Establishment.—The Secretary of Energy, act-
- 8 ing through the Under Secretary for Science (referred to
- 9 in this subtitle as the "Secretary"), shall establish a
- 10 Grand Challenges in Energy Research Initiative for the
- 11 purposes of integrating basic and applied sciences to solve
- 12 the Grand Challenges of Energy.
- 13 (b) Administration.—In administering the Initia-
- 14 tive, the Secretary shall bring together the skills and tal-
- 15 ents of multiple investigators to enable high-risk, cross-
- 16 cutting research of a scope and complexity that would not
- 17 be practicable with individual investigators.
- 18 (c) Grand Challenges.—Not later than 180 days
- 19 after the date of enactment of this Act, the Secretary shall
- 20 publish in the Federal Register a description of Grand
- 21 Challenges in Energy that includes—
- 22 (1) the Challenges described in the Grand Chal-
- 23 lenges report of the Basic Energy Sciences Advisory
- Committee of the Department of Energy; and

1	(2) energy-related Grand Challenges for Engi-
2	neering, as described by the National Academy of
3	Engineering.
4	(d) Director.—
5	(1) In general.—The Secretary shall appoint
6	a Director to manage the Initiative.
7	(2) QUALIFICATIONS.—The Director shall be an
8	individual who, by reason of professional background
9	and experience, is especially qualified to manage
10	multidisciplinary use-inspired research.
11	(3) Staff and other resources.—The Sec-
12	retary shall assign to the Director such personnel
13	and other resources as the Secretary considers nec-
14	essary to permit the Director to carry out the duties
15	of the Director.
16	(e) Grand Challenge Research Grants.—
17	(1) In general.—Consistent with sections 988
18	and $989$ of the Energy Policy Act of $2005$ (42)
19	U.S.C. 16352, 16353), the Secretary shall carry out
20	the research activities of the Initiative by making
21	competitively-awarded grants to, or entering into
22	technology investment agreements consistent with
23	section 1001 of that Act (42 U.S.C. 16391), consor-
24	tiums that clearly indicate to the Secretary the man-

ner by which the research—

25

1	(A) is motivated by and is designed to ad-
2	dress 1 or more of the Grand Challenges de-
3	scribed in subsection (c);
4	(B) will contribute to fundamental sci-
5	entific understanding; and
6	(C) will integrate basic and applied re-
7	search.
8	(2) Consortiums.—To be eligible for a Grand
9	Challenge research grant or agreement, a consor-
10	tium shall—
11	(A) be made up of at least 2 of the fol-
12	lowing groups—
13	(i) institutions of higher education;
14	(ii) National Laboratories of the De-
15	partment of Energy;
16	(iii) Federally-funded research and de-
17	velopment centers;
18	(iv) private industry; and
19	(v) not-for-profit institutions;
20	(B) contain at least 1 non-Federal entity;
21	and
22	(C) develop a multiyear road map that pro-
23	vides achievable metrics for integrating basic
24	research to assist industry in overcoming the
25	Grand Challenges described in subsection (c).

1	SEC53. GRAND CHALLENGES ENERGY RESEARCH FUND.
2	(a) Establishment.—The Secretary shall establish
3	a Grand Challenges Energy Research Fund (referred to
4	in this section as the "Fund") to carry out this subtitle.
5	(b) Funds.—The Secretary shall provide to the Fund
6	not less than 10 percent of the total amount made avail-
7	able to the Department of Energy for research and devel-
8	opment for each fiscal year, of which—
9	(1) 60 percent of the amount made available
10	under this subsection shall be derived from funds
11	made available to the Office of Science; and
12	(2) 40 percent of the amount made available
13	under this subsection shall be derived from funds
14	made available for applied energy programs of the
15	Department.
16	(c) Annual Plan for Allocation of Grand
17	CHALLENGES FUNDING.—As part of the annual budget
18	submission for each fiscal year, the Secretary shall submit
19	to Congress a report describing the manner in which the
20	Department of Energy has carried out this subtitle during
21	the preceding fiscal year and the manner in which the De-
22	partment proposes to carry out this subtitle during the
23	subsequent fiscal year, including—
24	(1) the total amount of funding made available
25	for research and development activities of the De-
26	partment for the applicable fiscal year:

1	(2) the amounts set aside for the Fund from
2	funding for research activities and development ac-
3	tivities of the Department; and
4	(3) a description of the manner in which funds
5	set aside under this section were allocated for the
6	preceding fiscal year and will be allocated for the
7	subsequent fiscal year.
8	(d) AWARD.—The amount of an award provided to
9	a consortium selected by the Secretary under this subtitle
10	shall be not less than \$50,000,000 for each fiscal year.
11	Subtitle E—Miscellaneous
12	SEC61. OTHER TRANSACTIONS AUTHORITY.
13	(a) In General.—Section 646 of the Department of
13 14	(a) IN GENERAL.—Section 646 of the Department of Energy Organization Act (42 U.S.C. 7256) is amended
14	Energy Organization Act (42 U.S.C. 7256) is amended
14 15	Energy Organization Act (42 U.S.C. 7256) is amended by striking subsection (g) and inserting the following:
<ul><li>14</li><li>15</li><li>16</li></ul>	Energy Organization Act (42 U.S.C. 7256) is amended by striking subsection (g) and inserting the following:  "(g) AUTHORITY TO ENTER INTO OTHER TRANS-
<ul><li>14</li><li>15</li><li>16</li><li>17</li></ul>	Energy Organization Act (42 U.S.C. 7256) is amended by striking subsection (g) and inserting the following:  "(g) Authority to Enter Into Other Transactions.—
14 15 16 17 18	Energy Organization Act (42 U.S.C. 7256) is amended by striking subsection (g) and inserting the following:  "(g) Authority to Enter Into Other Transactions.—  "(1) In General.—In addition to any other
14 15 16 17 18 19	Energy Organization Act (42 U.S.C. 7256) is amended by striking subsection (g) and inserting the following:  "(g) Authority to Enter Into Other Transactions.—  "(1) In General.—In addition to any other authority granted to the Secretary to enter into pro-
14 15 16 17 18 19 20	Energy Organization Act (42 U.S.C. 7256) is amended by striking subsection (g) and inserting the following:  "(g) Authority to Enter Into Other Transactions.—  "(1) In General.—In addition to any other authority granted to the Secretary to enter into procurement contracts, leases, cooperative agreements,
14 15 16 17 18 19 20 21	Energy Organization Act (42 U.S.C. 7256) is amended by striking subsection (g) and inserting the following:  "(g) Authority to Enter Into Other Trans- Actions.—  "(1) In General.—In addition to any other authority granted to the Secretary to enter into procurement contracts, leases, cooperative agreements, grants, and certain arrangements, the Secretary may

1	ther functions vested in the Secretary, including re-
2	search, development, or demonstration projects.
3	"(2) Advance projects.—Notwithstanding
4	any other provision of law, the Secretary may exer-
5	cise authority provided under paragraph (1) without
6	regard to section 3324 of title 31, United States
7	Code.
8	"(3) Relationship to other law.—The au-
9	thority of the Secretary under paragraph (1) shall
10	not be subject to—
11	"(A) section 9 of the Federal Nonnuclear
12	Energy Research and Development Act of 1974
13	(42 U.S.C. 5908); or
14	"(B) section 152 of the Atomic Energy Act
15	of 1954 (42 U.S.C. 2182).
16	"(4) Protection of Certain Information
17	FROM DISCLOSURE.—
18	"(A) In General.—Notwithstanding any
19	other provision of law, disclosure of information
20	described in subparagraph (B) is not required,
21	and may not be compelled, under section 552 of
22	title 5, United States Code, during the 5-year
23	period beginning on the date on which the in-
24	formation is received by the Department.

1	"(B) AWARD INFORMATION.—The infor-
2	mation described in this subparagraph is infor-
3	mation in the records of the Department that—
4	"(i) was submitted—
5	"(I) to the Department as part
6	of a competitive or noncompetitive
7	process with the potential to result in
8	an award to the person submitting the
9	information; and
10	$(\Pi)$ in conjunction with a trans-
11	action entered into by the Secretary
12	pursuant to paragraph (1); and
13	"(ii) is—
14	"(I) a proposal, proposal ab-
15	stract, and supporting documents;
16	"(II) a business plan submitted
17	on a confidential basis; or
18	"(III) technical information sub-
19	mitted on a confidential basis.
20	"(C) Protection of results.—
21	"(i) IN GENERAL.—The Secretary, for
22	a period of not more than 5 years after the
23	development of information described in
24	clause (ii), may provide appropriate protec-
25	tions against the dissemination of the in-

1	formation, including exemption from sub-
2	chapter II of chapter 5 of title 5, United
3	States Code.
4	"(ii) Information described.—In-
5	formation described in this clause is infor-
6	mation that—
7	"(I) results from a transaction
8	entered into by the Secretary pursu-
9	ant to paragraph (1); and
10	"(II) is of a character that would
11	be protected from disclosure under
12	section 552(b)(4) of title 5, United
13	States Code, if the information had
14	been obtained from a person other
15	than an agent or employee of the Fed-
16	eral Government.
17	"(5) Requirements.—
18	"(A) Selection procedures.—In enter-
19	ing into transactions under paragraph (1), the
20	Secretary shall use such competitive, merit-
21	based selection procedures as the Secretary de-
22	termines in writing to be practicable.
23	"(B) Determination.—Before entering
24	into a transaction under paragraph (1), the
25	Secretary shall determine in writing that the

1	use of a standard contract, grant, or coopera-
2	tive agreement for the project is not feasible or
3	appropriate.
4	"(C) Cost sharing.—A transaction under
5	paragraph (1) shall be subject to cost sharing
6	in accordance with section 988 of the Energy
7	Policy Act of 2005 (42 U.S.C. 16352).
8	"(D) Limitation on delegation.—The
9	authority of the Secretary under this subsection
10	may be delegated only to an officer of the De-
11	partment who is appointed by the President by
12	and with the advice and consent of the Senate
13	and may not be redelegated to any other per-
14	son.
15	"(6) Annual reports.—The Secretary shall
16	submit to Congress an annual report on the use by
17	the Department of authorities under this section.
18	"(7) Report.—
19	"(A) Definition of Nontraditional
20	GOVERNMENT CONTRACTOR.—In this para-
21	graph, the term 'nontraditional Government
22	contractor' has the meaning given the term
23	'nontraditional defense contractor' in section
24	845(f) of the National Defense Authorization

1	Act for Fiscal Year 1994 (Public Law 103–160;
2	10 U.S.C. 2371 note).
3	"(B) Report.—Not later than 2 years
4	after the date of enactment of this subpara-
5	graph, and 2 years thereafter, the Comptroller
6	General of the United States shall submit to
7	Congress a report describing—
8	"(i) the use by the Department of au-
9	thorities under this section, including the
10	ability to attract nontraditional Govern-
11	ment contractors; and
12	"(ii) whether additional safeguards
13	are necessary to carry out the authori-
14	ties.".
15	(b) Implementation.—
16	(1) IN GENERAL.—The final rule of the Depart-
17	ment of Energy entitled "Assistance Regulations"
18	(71 Fed. Reg. 27158 (May 9, 2006)) shall be appli-
19	cable to transactions under section 646 of the De-
20	partment of Energy Organization Act (42 U.S.C.
21	7256) (as amended by subsection (a)).
22	(2) Regulations.—The Secretary may revise,
23	supplement, or replace such regulations as the Sec-
24	retary determines necessary to implement the
25	amendment made by subsection (a).

1	SEC62. DEFINITION OF NATIONAL LABORATORY.
2	Section 2(3) of the Energy Policy Act of 2005 (42
3	U.S.C. 15801(3)) is amended by striking subparagraph
4	(P) and inserting the following:
5	"(P) SLAC National Accelerator Labora-
6	tory.".
7	SEC63. ADVANCED RESEARCH PROJECTS AGENCY—EN
8	ERGY.
9	Section 5012 of the America COMPETES Act (42
10	U.S.C. 16538) is amended—
11	(1) in subsection (a)(3), by striking "subsection
12	(m)(1)" and inserting "subsection $(n)(1)$ ";
13	(2) in subsection (c)—
14	(A) in paragraph (1)(A)—
15	(i) in the matter preceding clause (i)
16	by striking "energy technologies" and in-
17	serting "technologies"; and
18	(ii) in clause (ii), by striking ", in-
19	cluding greenhouse gases" and inserting
20	"and greenhouse gas emissions from all
21	sources"; and
22	(B) in paragraph (2)(C), by inserting ",
23	wherever practicable through competing indus-
24	trial-led teams," after "accelerating";
25	(3) in subsection (e)(1), by striking "all" and
26	inserting "the initiation of";

1	(4) by redesignating subsections (f) through
2	(m) as subsections (g) through (n), respectively;
3	(5) by inserting after subsection (e) the fol-
4	lowing:
5	"(f) Administration.—In carrying out this section,
6	ARPA-E may initiate and execute grants, contracts, coop-
7	erative agreements, and other transactions separate from
8	the Department of Energy.";
9	(6) in subsection (g)(1)(B)(iv) (as redesignated
10	by paragraph (4)), by striking "subsection (j)" and
11	inserting "subsection (k)";
12	(7) in subsection $(h)(2)$ (as redesignated by
13	paragraph (4))—
14	(A) by striking "2008" and inserting
15	"2009"; and
16	(B) by striking "2011" and inserting
17	"2012"; and
18	(8) in subsection (l)(1) (as redesignated by
19	paragraph (4)), by striking "4 years" and inserting
20	"7 years"; and
21	(9) in subsection (n)(2)(B) (as redesignated by
22	paragraph (4)), by striking "and 2010" and insert-
23	ing "through 2020"

1	SEC64. DOMESTIC VEHICLE BATTERY MANUFACTURING
2	RESEARCH.
3	The United States Energy Storage Competitiveness
4	Act of 2007 (42 U.S.C. 17231) is amended—
5	(1) by redesignating subsections (l) through (p)
6	as subsections (m) through (q), respectively;
7	(2) by inserting after subsection (k) the fol-
8	lowing:
9	"(1) Domestic Vehicle Battery Manufacturing
10	Research.—
11	"(1) In General.—The Secretary, acting
12	through the Assistant Secretary for Energy Effi-
13	ciency and Renewable Energy, shall conduct a re-
14	search program on manufacturing batteries and bat-
15	tery systems to support electric drive vehicles.
16	"(2) Purposes.—The purpose of the program
17	shall be to improve existing processes, or develop
18	new manufacturing processes, to enable higher qual-
19	ity and less expensive energy batteries for electric
20	drive vehicles.
21	"(3) Participants.—The program shall be
22	conducted by teams of researchers, which may in-
23	clude—
24	"(A) energy storage systems manufactur-
25	ers;

1	"(B) material and equipment suppliers of
2	battery and battery system manufacturers;
3	"(C) electric drive vehicle manufacturers;
4	"(D) National Laboratories;
5	"(E) other Federal agencies;
6	"(F) State and local governments; and
7	"(G) institutions of higher education.";
8	(3) in subsection (n) (as redesignated by para-
9	graph (1)), by striking "and (k)" and inserting "(k),
10	and (l)"; and
11	(4) in subsection (q) (as redesignated by para-
12	graph (1))—
13	(A) in paragraph (5), by striking "and" at
14	the end;
15	(B) in paragraph (6), by striking the pe-
16	riod at the end and inserting "; and"; and
17	(C) by adding at the end the following:
18	"(7) the domestic vehicle energy storage manu-
19	facturing research program under subsection (l)
20	such sums as are necessary for each of fiscal years
21	2009 through 2018.".